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# Avalanche Notes

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Westwide Avalanche Network

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DECEMBER 1990

December was colder and drier than normal over most of the West. In Alaska, Alyeska saw sustained snowfall from the 5th-13th and finished the month with 90% of normal. In the Cascades of Washington and Oregon, the heaviest snows fell from the 1st-5th, when Stevens Pass got 64"; Mt. Rainier, 59"; Snoqualmie Pass, 47"; and Crystal Mt., 37". Crystal reported a wind gust of 115 mph on the 4th. For December, Stevens Pass got 127% of normal snowfall, while Mt. Rainier-Paradise and Crystal Mt. got 90% and Mt. Hood Meadows, 75%. The Sierra of California endured another dry month: Alpine Meadows reported only 62% of normal. On the 18th, Alpine Meadows recorded winds that averaged 100 mph for a full hour.

In the Intermountain region, Big Mt., MT was favored with generous snows, receiving 49" on the 10th-19th and 27" on the 27th-28th. Elsewhere, December snows were below normal. On the 12th-20th, a sizable storm struck the Wasatch of Utah (56" at Snowbird and 51" at Solitude) and the Tetons of Wyoming (37" at Jackson Hole), and Bridger Bowl, MT received 23" on the 25th-26th, but that was the extent of mentionable snows. Snowbird got 92% of normal; Bridger Bowl, MT, 74%; Jackson Hole, 68%; and Sun Valley, ID, only 37%.

In Colorado, the 13th-23rd brought daily snows to all sites, but the rest of December was essentially dry. Wolf Creek was favored by a strong southern storm track, received 72" on the 13th-23rd, and wound up with 120% of normal. Sunlight got 110%, and Purgatory got 95%, but all other sites ranged from 42-90% of normal.

Taos, NM was the main beneficiary of the southern storm track and reported its greatest December snowfall of record -- 77.5". This amounted to 210% of normal, and Taos, along with Mt. Rainier and Big Mt., became the first sites to reach a snow depth of 100 inches.

In mid-month a massive arctic airmass oozed out of northern Alaska and Canada and parked itself over the western United States. Some extraordinary cold temperatures were seen -- even in normally mild maritime and desert climates such as Seattle, San Francisco, and Tucson. The arctic air first invaded Montana on the 18th, spread over all the West the next several days, and pretty much departed by Christmas Day. The northern Rockies were very cold that week, and the coldest of all was Big Sky, MT which hit -46F on the 22nd and endured four consecutive nights of -40F of colder. Jackson Hole, WY reached -34F on the 23rd, and Solitude, UT hit -35F on the same night. The 23rd was also the coldest night in Colorado, with most sites reaching -22 to -29F but Winter Park dipped to -35F. In the Cascades, temperatures dropped to -10 to -19F on the 21st and 22nd, and in the Sierra, Heavenly Valley, CA hit -22F on the 22nd.

In the Cascades, Crystal Mt. and Stevens Pass saw active avalanche cycles on the 1st-5th and again on the 28th. On the 2nd, the patrol director at Crystal took a scary ride in a post-control release. At Alyeska, AK on the 13th, a snowcat and its driver triggered a slide and took a 250-foot ride -- without damage or injury. In the Wasatch, Solitude experienced a slide cycle on the 19th-21st, and in Montana, Bridger Bowl went through a major cycle on the 23rd-28th. During this time, six patrollers took short rides in avalanches, and two lift skiers were caught in a post-contol release on the 26th. Also on the 26th, a snowcat was partly buried by an avalanche.

On December 2 on Fletcher Mt. in Colorado, the second avalanche death of the season occurred. A climbing party of seven were on their descent in near white-out conditions when the last two triggered a shallow slab. The avalanche carried them 700 feet vertical and buried both. One managed to dig himself out and then located the second victim by a hand sticking from the snow. Other party members arrived, and they had the victim out in about 25 minutes, but he never responded to resuscitation efforts.

An extensive avalanche cycle struck south-central Alaska on Christmas Day and continued to New Year's Day. This caused several serious incidents, including the third fatality of the season. On the 25th, a major slide buried the road to Hatcher Pass. Early on the 26th, the powder blast of a large avalanche struck a truck on the Seward Highway and either caused the driver to lose control or literally blew it off the road. On the 31st in the Delta Range, a snowmobiler was totally buried by an avalanche. His six companions found the top of his windshield sticking from the snow and began digging with their helmets. They uncovered him from 6 feet of snow, and he was alive, apparently because his full face-mask kept the snow away from his face.

The fatal incident occurred on the 29th at Powerline Pass in Chugach State Park. Two of five snowmobilers were caught in a massive avalanche that fractured up to 18 feet deep. One was partly buried, but the second was deeply buried. On January 2, rescuers using a magnetometer found the snowmobile under 29 feet of snow. Rescuers then used bulldozers to shave off layers of snow, and they found the victim on January 5. He had been 34 feet under.

Altogether in December, there were 21 reported incidents that caught 24 people, partly buried 4, buried 4, injured 2, and killed 2. Three vehicles were caught. For the season through December, a total of 32 incidents have been reported, 36 people have been caught, 7 partly buried, 6 buried, 3 injured, and 3 killed. Three vehicles have been caught.

U.S. FOREST SERVICE  
ALpine SNOW AND AVALANCHE RESEARCH PROJECT  
RESEARCH STATION EDDY COLLINS, COLORADO

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## SUMMARY OF WEATHER AND SNOW CONDITIONS

U.S. FOREST SERVICE  
ALPINE SNOW AND AVALANCHE RESEARCH PROJECT  
RM STATION FORT COLLINS, COLO.

DECEMBER 1990  
avalanche summary

AREA	CENTRAL AND SOUTHERN ROCKY MOUNTAINS		TOTAL	TOTAL	DATES OF	NUMBER OF DAYS WITH	TYPE OF AVALANCHE	FRACTURE LINE HEIGHTS IN FEET	VERTICAL DESCENT IN FEET	AVALS ACROSS MAJOR ROADS
	THIS MONTH NO.	THIS WINTER NO.								
WEST COAST										
ALPINE MEADOWS, CAL										
CRYSTAL MTN, WASH										
KIRKWOOD MOUNTAIN, CAL										
MT. HOOD MOUNTAINS										
SNOQUALMIE PASS I-90										
SNOQUALMIE PASS, WASH										
STEVENSON PASS, WASH										
SUGARLOAF, CALIF										
SNOWBIRD, UTAH										
INTERMOUNTAIN										
BIG MOUNTAIN, MONT										
BIG SKY, MONT										
BRIDGER BOWL, MONT										
JACKSON HOLE, WYO										
PARK WEST, UTAH										
SOLITUDE PASS, UTAH										
TETON PASS, WYO	22									
WOLF CREEK, WYO										
WOLF CREEK, WYO	14	164								
WOLF CREEK, WYO	7	104								
WOLF CREEK, WYO	12	96								
WOLF CREEK, WYO	2	2								
WOLF CREEK, WYO	12	13								
WOLF CREEK, WYO	2	2								
WOLF CREEK, WYO	12	22								
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